

a large series of symptoms and diseases capable of being rationally submitted to the electric current, and it is probable that many of them receive more benefit from this method of treatment than from any other.

In the class of disorders characterized by excessive functional activity, there are pain, spasm, contracture, and their allied affections. Here, also, we are generally ignorant of the seat and nature of the primary lesion; but we assume the symptoms to be due to some molecular, or, so-called, functional derangement, the objective existence of which, however, we are unable to demonstrate. But, whatever may be the cause, the special property of the electric current, applied in a certain manner, is to relieve motor and sensory superexcitability, not only at the time of application, but often permanently afterwards; and, if this influence be maintained, the nutrition is so modified as to result in the entire removal of the disease itself. These sedative and alterative effects of the electric current obviously suggest its employment in a vast variety of morbid conditions.

Finally, the tonic, modifying, or catalytic actions of electricity may be employed in many local and general diseases. As has been already stated, the effects are supposed to be due to the influence the current exercises on the nutrition of the tissues, the modification of the trophic functions, the alteration in the circulation, and the stimulation of the absorptive processes. Of the exact nature of these actions we know nothing, and we are equally ignorant of the precise pathological conditions for which they are applied; and practical experience alone indicates their utility. Hence electricity has, with advantage, been employed in local ailments, as in rheumatism, gout, joint-affections, skin-diseases, chronic inflammations, and so on. So, also, in more general maladies, on the same principles, it has been found beneficial, as in hysteria, neurasthenia, chorea, general debility, and a variety of other miscellaneous constitutional disorders. It is especially among the neuroses, and so-called functional derangements, in other words, in those diseases characterized by much suffering and distress, without demonstrable tissue-change to account for them, that the greatest triumphs of electrical treatment are to be found.

Although these are the general conclusions which have been arrived at as to the utility of electricity as a therapeutic agent, much yet remains to be accomplished in this direction, and a vast field for future research and discovery still lies open for cultivation. For the solution of the complex problems involved, an accumulation of facts, observed and recorded with the most rigid accuracy and impartiality, is demanded. Instead of electro-therapeutic investigations being conducted, as is too frequently the case, by those ignorant of the elements of the science, and registered by them in an imperfect, illogical, and unscientific manner, the question requires for its truthful elucidation an extensive technical knowledge, dexterity and precision in the management and recording of details, and the absence of prejudicial opinions or interested motives. Doubtless, any one adopting this line of inquiry in such a scientific spirit would be rewarded by novel and important results.—*Brit. Med. Journ.*, Nov. 22, 1884.

MEDICINE.

Examination of the Blood for the Diagnosis of Acute Diseases.

In a communication to the Société Française pour l'Avancement de la Science, M. HAYEM says that most valuable work has been done in the past

few years in the examination of the blood as a means of diagnosis of acute diseases; this study has only been made, however, by chemical procedures, and there is still wanting a practical method for exact diagnosis. There is in general pathology a vast field for what may be called the "Semeiology of the blood as regards the prognosis and diagnosis of diseases." Microscopic examination of the blood is difficult, on account of the excessive vulnerability of its elements; desiccation and evaporation change their form, and interfere with their examination.

Hayem has made an instrument which, notwithstanding its simplicity, has not been used by physicians, though he has used it for two years. He has made a small central disk in a plate of glass, by hollowing out a circular trench three millimetres in diameter. After having plastered vaseline on the part of the plate immediately outside of the trench, a drop of blood is placed on the disk and a small plate is placed over it and fixed. The drop of blood spreads uniformly under the plate and makes a layer of some thickness under the little disk, completely protected from evaporation and from the air. After having acquired a certain skill in this method, one makes all the preparations alike. This procedure has an immense advantage in showing the blood as it is in the vessels; the process of coagulation may be studied with the microscope, and the quantity of fibrin in the blood is easily appreciated. When normal blood is examined in this way it seems to contain only a very few and very short filaments of fibrin; in pathological cases it contains a thick fibrinous reticulum under certain circumstances. The amount of fibrin may be measured from the beginning to the end of a disease. Take, for example, an acute febrile disease, at its onset; at this time the diagnosis is difficult, but if there is not an abundant reticulum of fibrin one may almost certainly diagnose a pyrexial disease. This method is very useful in facilitating the diagnosis in difficult cases, as, for example, certain anomalous forms of intermittent fever. Suppose now that a patient gives general evidences of pyrexia at the beginning; if there is no fibrinous reticulum, the case is almost certainly one of typhoid fever; if the reticulum is thick typhoid fever may be thrown out of the diagnosis, as may such inflammatory complications as pneumonia or pleurisy. There is an affection which so closely resembles typhoid fever that it is often mistaken for it; mucous fever, gastric fever, or inflammatory fever, as it is called. In these cases there is a constant increase in the amount of fibrin in the blood, contrary to what is seen in typhoid fever. There are a certain number of exceptions; some of the inflammatory diseases of the phlegmasiæ are not attended by an increase in the amount of fibrin. Such are certain forms of pneumonia, as what has been called typhoid pneumonia, pneumo-typhus. If there is a slight reticulum of fibrin, somewhat greater than the normal, it is no longer a typhoid pneumonia, but a tuberculous pneumonia, a caseous lobar pneumonia. The phlegmasiæ, the types of which are gout, rheumatism, and frank pneumonia, may be always recognized by their augmentation of fibrin, even in the apyretic forms of gout and rheumatism.—*Revue Méd. Franç. et Étrang.*, Nov. 1, 1884.

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Pernicious Anæmia in a Child Five Years Old.

Dr. ADOLPHE KJELLBERG opens a paper in which he gives the history of this case, by stating that pernicious anæmia is of greater extent than was believed at the time when Biermer called attention to it by his description of the disease; that it is chiefly seen at mature age; that it runs even up to the period of old age; but that, so far as childhood is concerned, only one case has been thus far reported—that of a child 11 years old, by Quincke. After having mentioned the